

REMARKS

Applicants acknowledge receipt of the Examiner's Office Action dated July 5, 2005.

This Office Action rejecting pending claims 1-26. In light of the foregoing amendments and following remarks, Applicants respectfully request the Examiner's reconsideration and reexamination of all pending claims.

Original claims 1-7, 10-20 and 23-26 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2004/0152305 which names Yiu et al. ("Yiu") as applicants. For purposes of this Office Action only, Applicants will presume that Yiu is prior art to the invention described or claimed within the instant application. Applicants reserve the right to show that Yiu is not prior art to inventions described or claimed in the instant application.

Independent claim 1, as amended, recites:

A method comprising:
forming a tungsten plug in a dielectric layer;
forming an electrically conductive interconnect line
on the dielectric layer after the formation of
the tungsten plug in the dielectric layer,
wherein the tungsten plug is electrically
connected to the electrically conductive
interconnect line;
removing photoresist material to expose a surface of
the electrically conductive interconnect line;
exposing the exposed surface of the electrically
conductive interconnect line with ionized air
after the formation of the electrically
conductive interconnect line.

Applicants reserve the right to prosecute originally filed claim 1 (and originally filed claim 14) in a continuation application. Independent claim 1 makes clear that photoresist material is removed to expose a surface of the electrically conductive interconnect line, and that the exposed surface of the electrically conductive interconnect line is in turn exposed with ionized air.

The sections of Yiu cited by the Examiner did not teach or fairly suggest this limitation either alone or in combination with the remaining limitations of independent claim 1. The Examiner's attention is directed to Fig. 2C of Yiu which shows a photoresist 210 formed over conductive line 212. With continuing reference to Fig. 2C, Yiu describes in paragraph [0023] that substrate 200 is transferred from the etcher to a nitrogen storage chamber with a charge neutralizer installed therein. Inside the nitrogen storage chamber, the substrate 200 with the tungsten plug 206, the conductive line 212 and pattern photoresist layer 210 thereon is treated by the charge neutralizer such as ionizer for a period of between three and 63 minutes. Paragraph [0023] and Fig. 2C show that Yiu does not remove photoresist material to expose a surface of the electrically conductive interconnect line prior to exposing the exposed surface of the electrically conductive interconnect line with ionized air as required by amended independent claim 1, either alone or in combination with the remaining limitations of independent claim 1. As such, Applicants assert that independent claim 1 is patentably distinguishable over Yiu.

Independent claim 14 has been amended to include the limitations added to independent claim 1. As such, Applicants assert that independent claim 14 is likewise patentably distinguishable over Yiu.

The remaining claims depend directly or indirectly from independent claims 1 and 14. Insofar as independent claims 1 and 14 have been shown to be patentably distinguishable over Yiu, it follows that the remaining claims are likewise patentably distinguishable.

CONCLUSION

Applicants submit that all claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450, on 11/3/05.


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11/3/05
Date of Signature

Respectfully submitted,


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